REMARKS

Claims 1, 2, 4-7, 9-18 and 28-33 are pending. By this Amendment, claims 4-6 and 9-10 are amended. Support for the claims can be found throughout the specification, including the original claims, and the drawings. Reconsideration in view of the above amendments and following remarks is respectfully requested.

Entry of the amended claims is proper under 37 C.F.R. §1.116 since the amendments: (1) place the application in condition for allowance for the reasons discussed herein; (2) do not raise any new issues requiring further search and/or consideration since the amendments amplify issues previously discussed throughout prosecution without incorporating additional subject matter; (3) satisfy a requirement of form asserted in the previous Office Action; and/or (4) place the application in better form for appeal, if necessary. Entry is thus requested.

The Office Action rejected claims 1-2, 4-7, 9-11, 13-18, and 28-33 under 35 U.S.C. §102(e) as being anticipated by Bergman et al. (hereinafter "Bergman"), U.S. Patent No. 5,564,263. This rejection is respectfully traversed.

Independent claim 1 recites "a histogram converter which converts the color histogram of one of the extracted query multimedia data and the multimedia data to be retrieved into a histogram having a color space and color quantization method of the other of the color histogram of the extracted query multimedia data and the multimedia data to be retrieved" (emphasis added). The Bergman patent does not disclose such a histogram converter.

Rather, Bergman discloses a system for performing a histogram conversion. As shown in Figure 19, the system includes a search engine 1902 which converts a query color histogram Q of one type into a color histogram of another type, for purposes of performing an image search in image archives 1-3. In performing this conversion, Bergman discloses that the query histogram may be in an RGB color space and that the converted histogram may be a function of this RGB color space, i.e., the Bergman converter only performs a histogram conversion based on color space. That is, at col. 13, lines 52-54, Bergman states that "[a]ssuming the new color space is derived from the RGB color space, then myhist may be obtained via a transformation, F, of rgbhist..." Further, it is noted that in the transformation example discussed at col. 13, line 57-col. 14, line 2 and referred to by the Examiner, Bergman does not disclose that search engine 1902 performs a histogram conversion based also on color quantization, as recited in independent claim 1. In fact, in the example discussed at col. 13, line 57-col. 14, line 2 and referred to by the Examiner, both histograms appear to have the same number of bins. Bergman never discusses color quantization methods, which involve reducing an image to an appropriate number of representative colors. Further, the Examiner's comments at pages 2-4 (paragraph 5 of the Office Action) also do not address color quantization methods.

A histogram conversion is shown in the non-limiting embodiment of Figure 4 of the present application. Here, a histogram conversion is performed from one color space (RGB) and color quantization (R: five levels, G: five levels, B: five levels) into a histogram having another color space (HSV) and color quantization (H: seven levels, S: seven levels, and V: seven levels).

The Bergman search engine does not perform a transformation of this type, but rather only converts histograms based on color space.

Accordingly, it is respectfully submitted that independent claim 1 defines over Bergman. Dependent claims 2 and 4-5 are allowable at least for the reasons discussed above with respect to independent claim 1, from which they depend, as well as for their added features.

Independent claim 6 recites a content-based multimedia retrieval method which includes "converting a color histogram of one of the input query multimedia data and multimedia data to be retrieved into a color histogram having a color space and color quantization method of the other of the input query multimedia data and multimedia data to be retrieved" (emphasis added). Bergman does not disclose or suggest this converting step. As previously discussed, Bergman only performs a histogram conversion based on color space, not based on color space and color quantization, as recited in independent claim 6.

Thus, it is respectfully submitted that independent claim 6 defines over Bergman. Dependent claims 7 and 9-11 are allowable at least for the reasons discussed above with respect to independent claim 6, from which they depend, as well as for their added features.

Independent claim 13 recites "comparing the extracted color space and color quantization method of the query image with the color space and color quantization method of the multimedia data to be retrieved" (emphasis added). Bergman does not disclose or suggest these features.

In performing a color histogram transformation, search engine 1902 of the Bergman system transforms a color histogram in one color space to a color histogram in another color space, so that a query image may be compared to an image stored in an archive. In order to perform this transformation, the search engine must have knowledge of the color spaces of the images to be transformed. However, as discussed above, Bergman does not disclose or suggest comparing color quantization methods used to extract the histogram of the query image and the histograms for the images stored in its archives during a transform.

Independent claim 13 also recites "converting the color histogram of one of the extracted query multimedia data and the multimedia data to be retrieved into a color histogram having a same color space and color quantization method as the other of the extracted query multimedia data and the multimedia data to be retrieved" (emphasis added). As discussed above, Bergman does not disclose or suggest performing this conversion.

Thus, it is respectfully submitted that independent claim 13 defines over Bergman. Dependent claims 14-16 are allowable at least for the reasons discussed above with respect to independent claim 13, from which they depend, as well as for their added features.

Independent claim 17 recites "comparing the color spaces and color quantization methods of the query multimedia data and multimedia data to be retrieved" (emphasis added), and then performing a histogram conversion. Bergman does not disclose or suggest comparing color quantization methods performed for query color histogram Q and the color histograms formed for the images stored in its archives. Also, the claimed conversion is also performed

based on color quantization method, a conversion which is not disclosed or suggested in Bergman.

Accordingly, it is respectfully submitted that independent claim 17 defines over Bergman. Dependent claim 18 is allowable at least for the reasons discussed above with respect to independent claim 17, from which it depends, as well as for its added features.

Claim 28 recites "a description means for describing color space and color quantization method of an extracted color histogram" (emphasis added). Bergman does not disclose or suggest a description means of this type. As previously discussed, Bergman does not disclose that, when performing its color histogram transformations, search engine 1902 takes color quantization method into consideration. Also, claim 28 recites "a second color quantizer which extracts a color histogram of query multimedia data using a method which is same as the described color space and color quantization method" determined by the description means. Bergman also does not disclose or suggest these features.

Thus, it is respectfully submitted that independent claim 28 defines over Bergman. Dependent claims 29-31 are allowable at least for the reasons discussed above with respect to independent claim 28, from which they depend, as well as for their added features.

Claim 32 recites "judging whether a color histogram of query multimedia data corresponding to a color space and quantization method of multimedia data to be retrieved is stored in advance" (emphasis added). Bergman does not disclose or suggest these features. That

is, Bergman does not judge histograms based on color quantization nor does it perform such a judgment in advance of performing a similarity calculation between the color histograms.

Thus, it is respectfully submitted that independent claim 32 defines over Bergman. Dependent claim 33 is allowable at least for the reasons discussed above with respect to independent claim 32, from which it depends, as well as for its added features.

The Office Action rejected claim 12 under 35 U.S.C. §103 as being obvious over Bergman in view of Yaung, U.S. Patent No. 6,512,850. The rejection is respectfully traversed.

Claim 12 is allowable over Bergman for at least the reasons discussed above with respect to independent claim 6, from which it depends, as well as for its added features. Further, Yaung fails to overcome the deficiencies of Bergman as Yaung is merely cited for disclosing a threshold value used in performing a similarity comparison between multimedia data. Yaung, however, does not disclose or suggest converting a color histogram of one of a query multimedia data and multimedia data to be retrieved into a color histogram having a color space and color quantization of the other of the query multimedia data and multimedia data to be retrieved. Accordingly, it is submitted that claim 12 is patentable over the Bergman-Yaung combination.

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney, **Carol L. Druzbick**, at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
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